Abstract

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Chronic lymphocytic leukemia (CLL) is heterogenous disease with very variable clinical course. Early determination of prognosis of this disorder can be helpful for finding and initiation of adequate individual therapy.

Angiogenesis has prognostic potential and plays probably important role in pathogenesis of CLL. Endoglin (CD105) and angiopoietin 2 (Ang-2) also belong to angiogenic molecules. Data about expression of these molecules are still insufficient.

Therefore, we quantitated CD105 and Ang-2 mRNA in B cells of 49 untreated CLL patients by using the method of real-time quantitative PCR. Subsequently, we compared the expression of these angiogenic molecules to traditional as well as modern biological prognostic factors(Rai clinical stage, disease course, IgVH mutation status, expression of ZAP70 and CD38).

We found statistical significant association between expression of CD105 and all traditional or modern prognostic factors (Rai0 versus I - IV: $p = 0,004$; disease course: $p = 0,011$; IgVH mutation status: $p < 0,001$; expression of ZAP70: $p = 0,043$; expression of CD38: $p = 0,005$). We found significant association between expression of Ang-2 and IgVH mutation status ($p < 0,001$) as well. Association between Ang-2 and Rai clinical stage ($p = 0,421$), disease course ($p = 0,463$), expression of ZAP70 ($p = 0,389$) and expression of CD38($p = 0,134$) was not significant.

Our results show, that CD105 and Ang-2 play important role in pathogenesis and progression of CLL and increase expression is associated with poor prognosis of this disorder. But further analysis are needed to confirm the results in larger groups of patients.